



**DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
ANNUAL INSPECTION**

**Reference No.:** 32-0169  
**State Class:** T5  
**Pollutant(s):** T5 for VOC

**Environmental Specialist:** RAS  
**Route To:** MLC

**Date Inspected:** January 26, 2011

**Company:** Vacumet Corp.  
**Location Address:** 5705 Commerce Blvd  
**City/State/Zip:** Morristown, TN 37814  
**Mailing Address, if different:** same as above

**Facility Contact/Titles:** Keith Horvath, Engineering Supervisor, Metalized Paper Division.  
Gordon C. Miller, of MM&A, LLC is the consultant.

**Phone:** For Keith the office is 423-585-3152 & the fax is 423-587-1522, e-mail is khorvath@vacumet.com . For Gordon the office is 704-847-3140 & mobile is 704-618-9170, e-mail is gmiller9535@aol.com .

**Does Company impact an additional control area? YES/NO:** No  
**If Yes, pollutant type:**

**Does Company have:** NSPS (Part 60)? No                      PSD? No  
                                 NESHAPS (Part 61)? No                      MACT (Part 63)? JJJJ

**If YES, give subpart for NSPS, NESHAPS, MACT:**

**Date of the last annual inspection:** 12-2-2009

**Time period covered by this inspection, from:** 12-2-09 to 1-26-2011

**Is inspection partial or comprehensive?** Comprehensive

**Total time required for this inspection (hours):** 48.5

**Was company in compliance during entire inspection time period?** The company is "In Compliance in that no compliance problems were found with any issue under the purview of this inspector"

**If No, explain in final paragraph**

**If CM source: Date annual report received in EFO:**

**Date annual report review complete/acknowledged by EFO:**

**Did annual report have deviations from permit conditions (Y/N)?**

## **EXECUTIVE SUMMARY:**

The 2010-2011 Annual Compliance Inspection of the Vacumet Corp, Metalized Paper Production Facility at 5705 Commerce Blvd in Morristown, Tennessee was conducted on January 26, 2011 by Richard Smrz (RAS). During the inspection visit, RAS met with Keith Horvath who is the Engineering Supervisor and the current Facility Manager. RAS also met with Gordon Miller who is the company's corporate EH&S consultant.

The APC permit engineer assigned to the company is Sunanda Shajikumar (SKS) and the responsible official listed on the OpPermit is Mr. Horvath. SKS was not in attendance during the visit. RAS contacted SKS to invite her to participate in the AI. She indicated that she did not have a need not attend the AI meeting this year.

## **Background**

The facility is located on the south side of Commerce Boulevard in the east Morristown Industrial Park. Take US 11E to east Morristown Industrial Park, on the right as you enter Morristown.

The company has two printing operations which coat paper. The first process, called Faustell coating process (01) precoats the paper with a special coating which allows an aluminum coating to adhere to it. After the initial coating is applied the paper is coated with a thin coating of aluminum. After the paper is coated with aluminum, it must then be coated with a special clear coating which will accept printing ink. This is done with the Magnagraphics process. Various colored designs may also be added to the paper using the Magnagraphics process before the product is ready for shipment. The resultant paper is used for high quality food labels for products that range from candy bar wrappers to book covers. The facility also prints a small amount of wrapping paper on occasion.

The manufacturing operation currently operates one 12 hour shift per day on the days when they operate. Since production is currently so low, they typically only work a few days per week. There are currently about 16 workers at the facility and the company laid-off about 100 workers in July 2009. During the visit the plant was operating at a low rate with a significant amount of their capacity idled. No visible emissions have been seen at the plant in many years of operation since the permitted operations emit mainly volatile organic compounds (VOC).

Over the last year the company was covered by their renewed OpPermit 559215. This permit was issued on August 5, 2009 and expires on July 1 2014.

The facility's permit covers two point sources 01, and 04. Source (01), is described as "Faustel Paper and Film Coating Line", but known as the "Precoater". Source (04), is described as "Magnagraphics Metalized Paper Coating Line". The company is covered by the Federal MACT for Paper and other Web Coating, which can be found in 40 CFR 63, Subpart JJJJ. Similarly, the facility is covered by the State RACT for Paper and Related Coating found in 1200-03-18-.14 (see the reference in Condition E4-2). However, the company is also effectively exempt from the control strategy requirements of the MACT standard because they no longer emit HAPs, since Methyl Ethyl Ketone (MEK) was delisted by EPA from the Federal HAP list.

The permit allows the company to operate the Precoater (01) using one of two alternative operating scenarios (AOSs). The company's representatives explained that they never use AOS #1 which requires the use of materials whose monthly average VOC content is no higher than 2.9 lbs/gallon of coating. Instead, the company always uses AOS #2 which requires the company to use their Regenerative Thermal Oxidizer (RTO) to control VOC emissions from the Precoater,

and requires Compliance Assurance Monitoring (CAM), relevant record keeping and reporting. The Precoater no longer uses HAP containing materials nor emits any HAPs, so the RTO is now only used to destroy VOC emissions. The RTO has also been stack tested and shown to have a control efficiency of 96.96% which meets the minimum required efficiency of 95% referenced in Condition E4-7.

The permit also requires the company to conform to using materials whose monthly average VOC content is no higher than 2.9 lbs/gallon of coating for the Magnagraphics process (04). It is also notable that although the Magnagraphics exhaust can be sent to the RTO, it is not generally used for this process, since the company's goal is to use exempt materials whose monthly average VOC content is no higher than 2.9 lbs/gallon of coating.

Last year's AI was conducted by RAS and the previous AI was conducted by Tom Dalton (TED). Both AIs were comprehensive. During last year's AI and semi-annual report review, RAS found one self-reported deviation. After conferring with SKS, RAS issued a NOV for a violation of the 2.9 lbs/gallon of coating limit in Condition E5-2 for the Magnagraphics process. TED's previous AI in 2009 found compliance at the facility. No new NCO enforcement correspondence was found in the EFO company file during the file review, so the enforcement order has not been issued for last year's NOV.

## **CURRENT ISSUES AND INSPECTION RESULTS**

There was one new issue regarding the company's request on January 28, 2010 to use to an alternative operating scenario for the Magnagraphics process which would allow the ducting of solvent laden air from the Magnagraphics oven to their Recco Thermal Oxidizer (used for the Faustel Process) instead of keeping all currently uncontrolled emissions below the limit of 2.9 lbs of VOC per gallon of coating, as required by Condition E5-2.

The NCO replied to the company's request on March 17, 2010. The reply explained that the company will have to submit a minor permit modification application for such a change, and would eventually have to retest the Recco Thermal Oxidizer while under the increased load from the Magnagraphics process. Vacumet would also have to provide a permanent total enclosure (PTE) for capturing emissions from the Magnagraphics process, and use the PTE in a new source test before such a scenario is allowed. Since the NCO's reply the company has decided to forego providing a minor permit mod application, and instead continue to comply with the current requirements for the Magnagraphics process.

Other than this issue there are no outstanding issues from past inspections regarding this facility. RAS toured the facility and reviewed each inspectable condition (listed below) in the current permit as well as each inspectable condition in the previous permit pertaining to record keeping.

### **Permit and Records Review**

Following is a summary of the results of this review.

Condition E2: In the permit, the reporting periods run from April 1<sup>st</sup> through September 30<sup>th</sup> and from October 1<sup>st</sup> through March 31<sup>st</sup>. The first complete semi-annual period under the new permit ran from 10-1-2009 to 3-31-2010. The renewed permit required a SAR for this period by 5-30-2010. This report was submitted on 4-28-2010 and reviewed by RAS. The first annual compliance certification (ACC) covered the period from April 1, 2009 to March 31, 2010, and

was also due by 5-30-2010. It was also submitted on 4-28-2010. A Summary Evaluation Report (SER) memo along with an adequacy message was issued on 09/09/2010, which covered the company's Semi-annual Report (SAR) & Annual Compliance Certification (ACC) Review dated 4-28-2010.

The next SAR was due on 11-29-2010, and was received on 10-21-2010. It was also reviewed by RAS and he issued a SER memo and adequacy message on 11-17-2010. Both SARs and the ACC were found to be adequate.

Condition E3-1 requires the company to maintain all purchase orders and/or invoices or a record of purchase orders and/or invoices for all VOC and HAP containing materials along with MSDS sheets. This documentation must also be available for inspection and retained for at least 5 years. RAS found this documentation to be well maintained, quickly available, and adequately retained for the time period up to the expiration of the previous permit.

Condition E3-2 contains one Method 9 visible emissions evaluation (VEE) standard of 20% opacity for the entire facility. The PM emission standard for the Faustel process is stated in Condition E4-4. It indicates that the company may emit no more than 1.35 lbs/day. This emission level is equivalent to 492.75 lbs/yr or about 0.25 TPY. This level of emission is less than the 10 TPY threshold for company evaluation described in blocks 3 and 4 of the Opacity Matrix, which is prescribed in the Compliance Method for Condition E3-2. Therefore, company provided VEEs are unnecessary for this source.

The PM emission standard for the Magnagraphics process is found in Condition E5-3. It indicates that the company may emit no more than 0.57 lbs/day. This emission level is equivalent to 208 lbs/yr or about 0.10 TPY. This level is less than the 10 TPY threshold for company evaluation described in blocks 3 and 4 of the Opacity Matrix, which is prescribed in the Compliance Method for Condition E3-2. Therefore, company provided VEEs are unnecessary for this source as well.

Condition E3-3 requires the company to maintain a VOC Content Log containing the name, density and VOC content in pounds per gallon. This documentation must also be available for inspection and updated within 90 days of the initial usage of a new material. RAS found this log to be current, well maintained, and quickly available as required by the previous permit.

Condition E3-4 requires the company to comply with the MACT standard for Paper and other Web Coating, which can be found in 40 CFR 63, Subpart JJJJ. This condition also limits the facility to emissions of no more than 10 TPY of an individual hazardous air pollutant (IHAP), and no more than 25 TPY of any combination of HAPs (CHAPs) in any consecutive 12-month period. Compliance is assured through the records required by Condition E3-5. The content of these records demonstrates that the company no longer uses HAP containing materials, and therefore is in compliance with the requirements of this condition.

Condition E3-5 also requires the company to comply with the MACT standard for Paper and other Web Coating (40 CFR 63, Subpart JJJJ). This condition also limits the facility to emissions of no more than 9.9 TPY of an IHAP, and no more than 25 TPY of CHAPs in any consecutive 12-month period. The company complies with this condition by keeping the IHAP and CHAP logs prescribed in the Compliance Method of this condition. These logs demonstrate that the company does not use HAP containing materials, and as a result complies with the HAP limits in Conditions E3-4 and E3-5.

It is notable that the requirements of the Subpart JJJJ MACT standard are really not applicable to this source as long as emissions stay below the 10TPY/25TPY thresholds for applicability as is required by this condition.

Condition E3-6 is an informational condition which defines the standard for "records maintenance".

Condition E4-1 contains the VOC mass emission standard of 70 tons per year (TPY) for point 01. This condition also contains record keeping requirements for a yearly VOC and HAP log for point 01. RAS found that this log was well maintained, easily available and adequately retained. These records were also formatted to match the prescribed log found in the condition. The company's calculated emissions values easily demonstrate compliance with the 70 TPY VOC-limit and the records show that the facility has stopped emitting HAPs. Specifically, typical monthly VOC emissions have been no more than a few tenths of a ton per month (TPM), while typical rolling 12-month VOC emissions have slid to only a few TPY. Total monthly and rolling 12-month HAP emissions have been zero.

Condition E4-2 explains that the RACT requirements in 1200-3-18-.14 for Paper and Related Coating apply to the facility, and compliance with this standard is assured through the use of one of the two alternate operating scenarios (AOSs) outlined in the condition. There is no Compliance Method listed in this condition. However, Condition E4-3 contains a log which tracks the AOS which the company operates under at any given time, and RAS found that this log shows that the company always operates under AOS #2, and meets the requirements for this AOS described in Conditions E4-7 through E4-11 of the renewed permit.

Condition E4-3 requires the company to maintain the prescribed AOS tracking log in the format provided and keep it available for inspection. This condition also requires the company to retain this log for no less than 5 years. RAS found that the company complies with all of these requirements.

Condition E4-4 contains a mass emission standard of 0.005 grains per dry standard cubic foot (gr/dscf) for particulate matter (PM) from source 01. Compliance is based on AP-42 calculations, so the company complies with this condition as long as the equipment is unmodified, which was the finding during this inspection.

Conditions E4-5 and E4-6 pertain to AOS #1 for source 01, which the company never uses. Condition E4-5 contains a monthly VOC content limit of 2.9 lbs/gal of coating excluding water and exempt compounds, for coatings used for source 01. Compliance with this limit is to be assured through the record keeping required by Condition E4-6.

Condition E4-6 requires the company to maintain the prescribed log (Log 1), keep the log available for inspection, and retain copies of the log for at least five years. RAS found that the company complied with these record keeping requirements although the log shows no usage or emissions under AOS #1. So, the company also complies with the content limit in Condition E4-5.

Conditions E4-7 and E4-11 pertain to AOS #2 for source 01, which the company uses exclusively. AOS #2 assures compliance through the use of the Regenerative Thermal Oxidizer (RTO) emissions control device. Condition E4-7 requires the company to install and operate the control system, and requires the control system to exhibit an efficiency of at least 95%. The company complies with these requirements and the control system is almost 97% efficient.

Condition E4-8 requires the company to use a Permanent Total Enclosure (PTE) to adequately capture emissions from the process in conjunction with the control device. RAS found that the company complies with all of the requirements of this condition.

Condition E4-9 prescribes the installation, calibration, operation, and maintenance of monitoring and recording equipment to demonstrate compliance with a RTO combustion temperature that averages at least 1636 °F. The condition also specifies how temperature records are to be maintained. RAS found that the company complied with all of the requirements of this condition with a typical RTO combustion temperature closer to 1700 °F.

Condition E4-10 requires the company to maintain VOC/HAP emission records in the format prescribed as Log 2 in the condition. This log must also be kept available at the source location and retained for at least 5 years. RAS found that these records demonstrated compliance with these record keeping requirements.

Condition E4-11 is informational and contains estimated actual annual emissions for SO<sub>2</sub>, NO<sub>x</sub>, and CO.

Condition E5-1 contains a VOC mass emission standard of 175 tons per year (TPY) for point 04. Compliance assurance with this condition is provided through the records required by Condition E5-4. Condition E5-2 contains a VOC material content limit of 2.9 lbs per gallon of coating for point 04. Compliance assurance with this condition is also provided through the records required by Condition E5-4.

Condition E5-3 contains a particulate matter mass emission limit of 0.005 gr/dscf for point 04. Compliance assurance with this condition is provided through the company's annual certification, which was found to be acceptable.

Condition E5-4 contains the record keeping requirements used to establish compliance with the VOC emission limit in Condition E5-1 as well as the VOC material content limit in Condition E5-2, for point 04. The required logs (Log 3 & 4) had to be maintained in the form of the monthly and yearly logs which are prescribed in this condition. These logs were also to be kept available and retained for at least five years.

RAS found that these logs were well maintained, easily available and adequately retained. RAS also found the format of Log 4 was acceptable to meet the format requirements of Condition E5-4. The company's calculated emissions values easily demonstrate compliance with the 175 TPY VOC-limit and the records show that the facility has stopped emitting HAPs. Specifically, since the last AI, typical monthly VOC emissions have well under ½-ton per month (TPM), while typical rolling 12-month VOC emissions have slid from over 60 TPY to less than a couple of tons per year. Total HAP emissions from point 04 have been zero TPM since 2006. Also, the company's weighted average for material content has demonstrated compliance with the 2.9 TPY VOC-limit, with recent values normally in the 0 to 0.8 range, and some recent months using materials with no VOC at all.

#### **Visible Emissions, Fugitive Emissions and Plant Tour**

Condition E3-2 contains the only visible emissions standard for the facility. This Method 9 standard prescribes no more than 20% opacity for the entire facility. During the facility tour operations proceeded at the new normal level for the facility, which is now significantly below the level permitted. No VEs were found at the facility so a VE evaluation was not necessary during the visit. No fugitive emissions were found around the facility during the AI visit, and RAS noted that the grounds were maintained free of dusty materials.

RAS also provided the latest guidance relating to the new mercury disposal requirements passed by the legislature during the 2010 legislative season. Effective January 1, 2011, the state's Mercury Product Disposal Control Act prohibits "covered generators" from disposing "mercury-added consumer products" as non-hazardous solid waste. The requirements of this act promote mercury recycling and require all TDEC inspectors to make an inquiry at any facility they inspect as to whether or not the facility is aware of the requirements concerning mercury recycling.

### SUMMARY OF INSPECTION FINDINGS

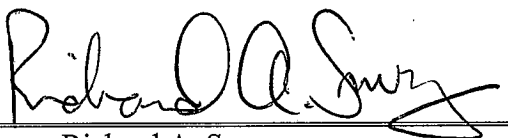
RAS comprehensively toured this operation, and reviewed the permit with the company. The KEFO file check indicated that there were no new NOV's or enforcement actions issued by the NCO since the last AI on 12-2-2009. The AI for last year found compliance with an excursion, and coordination with the NCO staff eventually found that the reported excursion was also a violation.

As a result, the inspector issued one NOV since the last AI. That NOV was issued on March 3, 2010 as a result of the Semi-annual report review completed on the same date, **but the NOV covered a violation committed prior to the last AI visit.** All issues related to that finding and the NOV have been closed out, except for the final enforcement order from the NCO.

The most recent periodic record keeping submittals have contained records which demonstrated compliance. This year's and the last two years of annual inspections can be considered comprehensive, since all sources at the facility were thoroughly scrutinized during the AI, from both physical and records standpoints.


All required records dating back to the last AI were reviewed for maintenance availability and retention, as well as spot checked for format, and content. The records review found that the company's records demonstrated compliance with record keeping requirements and corresponding emissions limits since the last AI.

The on-site tour indicated that there was no restricted activity such as construction, demolition, fugitive dust, or open burning, occurring at the facility. The KEFO has received no complaints regarding this facility since the last AI visit. A comprehensive field check of the facility's operations shows compliance, and there are no follow-up actions that need to be taken as a result of this AI. Therefore, RAS found that the company is "In Compliance in that no compliance problems were found with any issue under the purview of this inspector".



Richard A. Smrz  
Environmental Specialist 4,  
Knoxville Regional Environmental Field Office  
VEE Certification Number: 1017  
Certification Expiration Date: March 24, 2011

I verify that the format and content of this report conforms to established TN Division of Air Pollution Control annual inspection standard operational procedures guidance and that the compliance determination made in this report is correct.

  
Supervisor/Manager  
Date

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